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EXAMINER

MM12/1123

ROBERT MOLL
WILSON SONSINI GOODRICH & ROSATI
650 PAGE MILL ROAD
PALO ALTO CA 94304-1050

SCOTT JR., L.

ART UNIT

PAPER NUMBER

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DATE MAILED:

11/23/99

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined. ☒ Responsive to communication filed on 9/06/99 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire THREE (3) month(s), — days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of informal Patent Application, Form PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claim(s) 1-5 are pending in the application.
Of the above, claim(s) _____ is withdrawn from consideration.
2. ☐ Claim(s) _____ has been canceled.
3. ☐ Claim(s) _____ is allowed.
4. ☒ Claim(s) 1-5 are rejected.
5. ☐ Claim(s) _____ is objected to.
6. ☐ Claim(s) _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawing(s) under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawing(s) are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction(s), filed on _____, has been ☐ approved. ☐ disapproved (see explanation).
12. ☐ Acknowledgment is made of the claim for priority under 35 USC 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 3 of claim 1 applicant claims *a motor operably coupled to the shaft*, it is not clear within the context of claim language how the motor is *operably coupled* to the shaft; *operably coupled* to the shaft to or for what? ,claim 1 is indefinite and incomplete. In : line 4 of claims 1 and 3, and in line 3 of claim 2 applicant claims *an upper case for mounting the rotating shaft*(claim 1); *an upper case for mounting the stationary shaft*(claim 2);and *an upper case for mounting the oscillating shaft*(claim 3); it is not clear within the context of claim language what constitutes an upper case, nor is it clear how the upper case is *for mounting the rotating shaft*(claim 1'); *mounting the stationary shaft*(claim 2)t or *mounting the oscillating shaft*(claim 3) ,claims 1-3 are indefinite and incomplete. In line 6 of claims 1 and 3 and in line 5 of claim 2 the recitation: *a laser projecting a non-collimated beam* expresses a desired result while failing to recite the structure and/or means necessary to provide that result. Further where or how is the module housing attached to the shaft , to accomplish what, claims 1-3 are indefinite and incomplete. In line 7 of claims 1 and 3 and in line 6 of claim 2, the recitation: *the center ray* lacks a clear antecedent basis. In claim 5 it is not clear how a *main shaft* defines an axis of rotation, claim 5 is indefinite. Further where is the shaft located in the housing,and what rotates about the axis of rotation; claim 5 is indefinite and incomplete. In line 3 of claim 5 since nothing has been claimed as rotating, it is not clear how a *shaft* defines an axis of

rotation , claim 5 is indefinite and incomplete. In line 4 of claim 5 it is not clear where the plurality of holes are located with respect to the device as a whole; claim 5 is indefinite and incomplete. Likewise in lines 5 and 6 of claim 5 how does the motor connectively relate to the device as a whole; claim 5 is indefinite and incomplete. In line 5 of claim 5 it is not clear what is meant by the recitation *a case with a bearing to support the main shaft* ; what supports the main shaft ,the case ,the bearing or both; further how does *a case with a bearing* support *the main shaft* ; finally, it is not clear where the bearing is located with respect to the case and/or the main shaft ; claim 5 is indefinite and incomplete. Since it is not clear where the plurality of cylindrical holes are located with respect to the device as a whole, it is also not clear where the diode modules are located since the diode modules are claimed to be located in the cylindrical holes; claim 5 is indefinite and incomplete. How in lines 8 and 9 of claim 5 are the diode modules, *adapted* to project a laser beam along a center ray; claim 5 is indefinite and incomplete.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim 1 is, insofar as definite rejected under 35 U.S.C. 102(b) as being *anticipated* by Kirchever et al('120) or Kirchever et al('948).

Applicant complains in comments on p.2 of his remarks, "...each reference cannot anticipate any of claims 1-5 because each fails to disclose a system having a laser projecting a non-collimated beam where *the center ray of the non-collimated beam is perpendicular to the shaft*. Fig.1A of Kirchever et al('120) or Kirchever et al('948). clearly discloses *the center ray of the non-collimated beam is perpendicular to the shaft* . Further, when the motor is on the shaft is rotating and the structure of claim 1 is met by Kirchever et al('120) or Kirchever et al('948).

Claim 2 is, insofar as definite rejected under 35 U.S.C. 102(b) as being *anticipated* by Kirchever et al('948).

Applicant complains in comments on p.2 of his remarks, "...each reference cannot anticipate any of claims 1-5 because each fails to disclose a system having a laser projecting a non-collimated beam where *the center ray of the non-collimated beam is perpendicular to the shaft*. Fig.1A of Kirchever et al('948) clearly discloses *the center ray of the non-collimated beam is perpendicular to the shaft* . Further, when the motor is off and the shaft is not

oscillating, i.e. the *shaft is stationary* and the structure of claim 2 is met by Kirchever et al('948).

Claim 3 is, insofar as definite rejected under 35 U.S.C. 102(e) as being *anticipated* by Kirchever et al('512).

Applicant complains in comments on p.2 of his remarks, "...each reference cannot anticipate any of claims 1-5 because each fails to disclose a system having a laser projecting a non-collimated beam where *the center ray of the non-collimated beam is perpendicular to the shaft*. Fig.1A of Kirchever et al('512) clearly discloses *the center ray of the non-collimated beam is perpendicular to the shaft*. Further, when the motor is on the shaft is oscillating and the structure of claim 3 is met by Kirchever et al('512).

Claim 3 is, insofar as definite rejected under 35 U.S.C. 102(b) as being *anticipated* by Kirchever et al('120).

As above, Applicant complains in comments on p.2 of his remarks, "...each reference cannot anticipate any of claims 1-5 because each fails to disclose a system having a laser projecting a non-collimated beam where *the center ray of the non-collimated beam is perpendicular to the shaft*. Fig.1A of Kirchever et al('120) clearly discloses *the center ray of the non-collimated beam is perpendicular to the shaft*. Further, when the motor is on the shaft is oscillating and the structure of claim 3 is met by Kirchever et al('120).

The following is a quotation of 35 U.S.C. §103 which forms the basis for all obviousness rejections set forth in this Office action:

“A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.”

Claims 1-4 are, insofar as definite rejected under 35 U.S.C. 103 as being unpatentable over Kirchever et al('120).

Kirchever et al('120) discloses: a laser housing including a main shaft(22) defining an axis of rotation and a cylindrical hole; a laser/optics subassembly(28) mounted on a support(26),the subassembly(28) and support(26) are jointly oscillated and turned with the shaft(22); the subassembly includes a hollow tube(30),a laser diode(32) fixedly mounted at one axial end of the tube. Given the structure of the references and the use of one diode in a cylindrical hole in the module, using a plurality of diode in a plurality of cylindrical holes would be obvious. Further, since a frame or point of reference would be necessary to determine whether an object is *rotating* as opposed to *oscillating* and since no frame or point of reference has been recited in either of claims 1 or 3, it is

clear that using a different point or frame of reference would make a rotating object look as though it is oscillating and vice versa. As to Applicant's proported point of novelty, using fig. 1A, it is clear that the exit laser beam and a mechanical axis of the housing are perpendicular to the shaft(22). Further, given the structure of the reference, it would be obvious to one of ordinary skill in the art that when the motor is on and the shaft is oscillating or rotating, the structure of claims 1 and 3 is met by Kirchever et al('120). When the motor is off and the shaft is not oscillating or rotating, i.e. the *shaft is stationary*, the structure of claim 2 is met by Kirchever et al('120).

Claim 5 is, insofar as definite rejected under 35 U.S.C. 103 as being unpatentable over Kirchever et al('120).

Kirchever et al('120) discloses: a laser housing including a main shaft(22) defining an axis of rotation and a cylindrical hole; a laser/optics subassembly(28) mounted on a support(26), the subassembly(28) and support(26) are jointly oscillated and turned with the shaft(22); the subassembly includes a hollow tube(30), a laser diode(32) fixedly mounted at one axial end of the tube. Given the structure of the references and the use of one diode in a cylindrical hole in the module, using a plurality of diodes in a plurality of cylindrical holes would be obvious. The *motor coupled to the main shaft* in line 6 of claim 5 would be inherent in the device since the only shaft claimed is the main shaft which must be coupled to the motor if it(the main shaft) is to rotate. Likewise since the *center ray of one laser projected beam is perpendicular to the axis of rotation*, the center ray of plural laser projected beams perpendicular to the axis of rotation would be obvious. The projected laser beam of the laser rotates about shaft (22) and emits a center ray

in a direction perpendicular to the axis of rotation. Further one of ordinary skill desiring the laser of the fig 1A to pivot vertically along window 40 to scan along a vertical direction would be motivated to mount a bearing on the support case 26 to support the case on the shaft. Applicant's device is obvious.

Applicant's arguments filed 9/06/99 have been fully considered but are not persuasive.

With regard to Applicants statement that Kirchever et al('512) *without regard to related U.S. Application data is not time-wise qualified to be prior art against the present application* ,the following comments are directed: Surely Applicant is not suggesting that the *Related U.S. Application data* in Kirchever et al('512) be **ignored**, indeed ignoring such data would likewise mean that the *Related U.S. Application data* in his patent(US 5,754,582) should also be ignored, thereby allowing possible art between the dates of 4/3/95 and 2/25/97 to be applied against his patent. Even a novice is aware of the **co-pendency** requirement of patents under the *Related U.S. Application data* ;it is suggested that Applicant review: **35 USC 102(e)** and **35 USC 120**; Kirchever et al('512) is a **valid** reference against applicant's claims! Applicant continues on p.2 of his remarks stating, "*Applicant submits each reference either alone or together does not render any of claims 1-5 obvious because each of the cited references is for an application,e.g., bar code scanning which does not require or need to modify the laser beam projected from the system so that the center ray of the non-collimated beam is perpendicular to the shaft.*" First it is pointed out to Applicant that the use("application") of the laser system of the prior art is not at issue , indeed the prior art laser system could be used in a dump

truck and still be a reference against applicant's broad claims. Further it is pointed out that: (a) A reference is to be considered not only for what it *expressly states*, but for what it would reasonably have suggested to one of ordinary skill in the art..(see In re DeLisle, 160 USPQ 807) ;(b) ..under section 103, not only are the teachings of the prior art taken into consideration, but also the level of ordinary skill in the pertinent art.(see In re Luck, 177 USPQ 523); and (c) ...it is well settled that the test of obviousness is not whether the features of one reference can be bodily incorporated into the structure of another, and *proper inquiry* should not be limited to the specific structure shown by the references, but should be into the concepts fairly contained therein, and the overriding question to be determined is whether those concepts would suggest to one skilled in the art the modifications called for by the claims.(see In re Van Beckum et al, 169 USPQ 47). When one considers the points of law along with a careful comparison and review of the art of record, it is clear that Applicant's device is obvious.

As to applicant's example between an automobile which has an oscillating shafts attached to the wheels instead of rotating shafts, although amusing, it is at best an example with little or no merit since in a different frame or point of reference, not in the car, the oscillating shaft may be viewed as rotating or vice versa.

Applicant is not being copies oif the references to: Kirchever et al('120) and Kirchever et al('512) and Kirchever et al('948) as they were supplied in the previous Office action.

Serial No. 936,304


Art Unit 2874

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Léon Scott Jr. at telephone number (703)308-4884.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.

November 20, 1999


Leon Scott, Jr.
Primary Examiner
Léon Scott, Jr.
Primary Examiner
Art Unit 2874